PERCEIVED GENDER ATYPICALITY ON HIGH AND LOW GENDER ROLE RIGIDITY

A Senior Scholars Thesis

by

AIMEE MARIE HOWARTH

Submitted to the Office of Undergraduate Research
Texas A&M University
in partial fulfillment of the requirements for the designation as

UNDERGRADUATE RESEARCH SCHOLAR

April 2010

Major: Psychology

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Approved by:

Research Co-Advisors	Gerianne Alexander Nora Charles
Associate Dean for Undergraduate Research:	Robert C. Webb

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ABSTRACT

Perceived Gender Atypicality on High and Low Gender Role Rigidity. (April 2010)

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Department of Psychology

The objective of this research was to study the physiological, emotional, and cognitive response to gender role threats in individuals with high and low gender role rigidity. Participants were selected based on their responses to the Masculine and Feminine Gender Role Stress scale (MGRS &FGRS) completed during a pre-screening session. At the test session, participants (41 men and 45 women) completed the Bem Sex Role Inventory (BSRI) and a mating preferences questionnaire using the 13 criteria from Buss and Barnes that measured the strength of self-identification with traditionally masculine and feminine gender roles, levels of stress with their reported gender role, and preferences for prospective partners' gender-related traits and behaviors. After completing the questionnaire measures, participants viewed 20 pictures presented on a computer monitor depicting typical and atypical female gender role job professions (e.g. nurse and a construction worker), as well as typical and atypical male gender role job

professions (e.g. businessman and a receptionist). During the 20-minute presentation of pictures, an eye tracker recorded visual attention and a heart rate activity watch monitored physiological response. At the end of the session, automatic cognitive responses were measured by having participants recall the content of the pictures they had viewed. Results suggest a difference in visual attention and emotional response between atypical and typical pictures, as well as a difference between the high and low gender role rigidity groups, such that compared to the low gender role rigidity group, the high gender role rigidity group showed an increase in correct responses of gender typical pictures on the memory task. Gender role rigidity influenced masculinity and femininity as well as certain mate preferences. Preliminary analyses of physiological responses to the pictures show a difference between men and women, and between high and low gender role stress groups. The results of this study will further our understanding of how learned stereotypes shape automatic cognitive processes, such as visual attention and memory, and how the rigidity of an individual's gender role influences emotional and physiological reactions to the various situations.

DEDICATION

To feminism, and to all the wonderful faculty in the psychology and women's and gender studies department at Texas A&M University who have persistently challenged, motivated, and inspired me to pursue my passions, and to settle for nothing less.

ACKNOWLEDGEMENTS

I would first and foremost like to thank my research advisor, Dr. Gerianne Alexander, my secondary research advisor, Nora Charles, and lab co-worker, Eric Strongin for all their guidance and support throughout the course of this research. This project would not have been possible without all of their wisdom and encouragement that has helped me succeed this past year.

Thanks also to my friends and colleagues for making my experience at Texas A&M a wonderful one, full of exciting, inspiring, as well as trying times, that I will forever cherish and continually grow from.

Finally, thanks to my mom and dad, who without their love and support I would have never had this opportunity. I would also like to thank my sisters, Kristen and Lindsay, all my wonderful roommates, and Cayce, for all their patience and love.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

TABLE Page

CHAPTER I

INTRODUCTION

The objective of this research is to study the physiological, emotional, and cognitive response to gender role threats for participants categorized into two groups: high and low gender role rigidity. The participants will be sorted into groups based on their responses to the Masculine and Feminine Gender Role Stress scale (MGRS &FGRS; Eisler & Skidmore, 1987) during a pre-screening session. At the test session, the participants will also complete the Bem Sex Role Inventory (BSRI; Bem, 1974) and a mating preferences questionnaire using the 13 criteria from Buss and Barnes (1986). These measures will provide information on each participant's identification with traditionally masculine and feminine gender roles, level of stress with their reported gender role, and preferences for prospective partners' gender-related traits and behaviors. Identification with a masculine gender role has been related to displaying little emotion, physical dominance in terms of fitness, sexual prowess, and appearance, dominance in intellect meaning decisive, ambitious and certain, dominance in profession by outperforming women, and having a larger salary, and dominance in sex performance. (Eisler & Skidmore, 1987) Similarly, identification with a feminine gender role has been linked to emotions, attractiveness, fearful of violence, passivity, and health. (Gillespie & Eisler, 1992) Although gender roles are typically linked to biological sex and are often considered "normal" behavior in

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This thesis follows the style of the *Psychology of Women Quarterly*.

a society, previous research suggests that every individual does not adopt gender role orientations easily. (Philpot, Brooks, Lusterman, & Nutt, 1997) Gender role conflict in men occurs when "rigid, sexist, or restrictive gender roles, learned during socialization, result in personal restriction, devaluation, or violation of others or self" (O'Neil, 1990). Similar results are shown in women because of the increase in conflicting roles between traditional values and modern expectations, such as the increase of women in the work force. (Philpot, Brooks, Lusterman, & Nutt, 1997) Higher levels of gender role stress in men have also been associated with increased threat in situations that challenge masculine gender roles, especially situations that suggest feminine characteristics (Moore, 2005). In women, gender role stress is related to increased anxiety and arousal when presented with threats and challenges to attributes associated with femininity, such as physical attractiveness and reproductive viability. (Moore, 2005).

To measure responses to gender role threats and reactions to gender atypicality, participants will be shown pictures of men and women performing tasks that are traditionally ascribed to one sex. We use drawings instead of actual photographs to limit confounding variables such as race, weight, and age. In addition, the pictures consist of occupations across all incomes levels to eliminate variables of class. An example of a typical male gender role picture would be a man working on a construction site and an example of an atypical male gender role picture would be a man working as a nurse. An example of a typical female gender role picture would be a woman teaching a kindergarten class and an example of an atypical female gender role picture would be a

female firefighter. A baseline heart rate will be established prior to beginning this part of the experiment, and then heart rate will be measured continuously throughout this task to measure physiological responses. To measure emotional reactions the participants will rate each scene in the picture for levels of arousal and affect (e.g., anger) after the picture viewing.

The Buss and Barnes mating preferences scale and the Bem Sex Role Inventory will supplement the information about each individual's gender role by providing details about an ideal partner that, theoretically, conforms to the participant's conceptualization of that gender, as well as each individual's identification with feminine and masculine traits.

In addition to participants' physiological and emotional reactions to atypicality in gender role occupations, I am interested in the cognitive processes that accompany these reactions and how cognition can play a role in attention to the images and memory for what was viewed. Previous investigations of visual attention of gender-stereotyped stimuli have produced conflicting results. Some research has shown that when people view pictures of both women and men in business attire, they tend to focus more on male targets (Maner, DeWall & Gailliot, 2008). However, it is unknown whether this effect would occur if sex and social status were separated, such as in the gender atypical images that participants in this study will view. For example, in a picture of a female president speaking to an audience of mainly men, it is not known whether a viewer's

attention would be directed towards the men because of their gender, or to the woman because of her role. Other research suggests that gender stereotyping is automatic. By using eye tracking technology, some have found that readers focused more on pronouns specified by a gender that did not match the stereotype associated with the label (e.g., the electrician taught herself…). (Duffy & Keir, 2004) Accordingly, a similar effect may be seen when participants view images that do not match their gender role stereotypes, especially for participants with more rigid gender role values. Another way to measure cognitive processes is a recall of the images. When children recall illustrations in picture books containing both gender-consistent and gender-inconsistent images, they tended to distort or misremember gender-inconsistent images. (Frawley, 2008) These results illustrate that gender-inconsistent images are processed differently than gender consistent images.

My first hypothesis is that the high gender role rigidity group will have a greater increase in heart rate due to higher arousal and anxiety while viewing pictures that do not conform to their gender role expectations. I also predict that there will be a sex difference in the physiological and emotional responses in the high gender role rigidity groups, such that men will have a higher arousal and anxiety leading to an increased heart rate. Research has suggested that masculinity is generally more fragile than femininity and anything that calls one's manhood status into question, such as questioning one's sexual prowess, is especially anxiety provoking. Women, who do not seem to have the same kind of social pressures associated with proving their

identification with their gender role, might not find threats to their femininity threatening. (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008) We expect the female high rigidity and male low rigidity to have similar physiological responses in increased heart rate because of the increased societal pressures on masculinity. Women in the low gender role rigidity should display the least amount of physiological arousal. (Franchina, Eisler, & Moore, 2001) As for results on visual tracking, there seems to be a gap in the research. Since there seems to be some competing theories in attention and memory involved in gender stereotyping, we are unsure of the responses to the images. In terms of attention, some studies have shown that stereotyping is automatic and that greater attention is shown to atypical gender roles (Duffy &Keir, 2004) and some on social dominant cues suggesting gender typical or masculine typical images. (Maner, DeWall & Gailliot, 2008) As for recall of the viewed images, studies suggest people correctly remember gender typical scenarios and misremember or distort gender atypical scenarios. (Frawley, 2008) However, it could be that striking images, such gender atypical pictures will have a greater imprint on memory. Our data will help draw some conclusions regarding attention and memory.

The results of this study should further our understanding of how learned stereotypes shape automatic cognitive processes, such as visual attention and memory, and how the rigidity of an individual's gender role may influence emotional and physiological reactions to the various situations.

CHAPTER II

METHODS

Participants

A total of 41 men and 45 women (ages 18-25) from the Texas A&M Department of Psychology participant pool volunteered for the study. Participants who scored in the highest and lowest percent quartile were selected for the high and low gender role rigidity groups for this study. Once these participants were identified, they were emailed an offer to participate in this research in order to partially fulfill the requirements for their class. All participants gave informed consent and were tested individually in a session lasting approximately 60 minutes.

Measures and procedures

Heart rate was measured throughout the eye-tracking part of the study using a Polar RS 800CX activity watch placed on either wrist. Eye movements were measured using an infra-red eye-tracker with remote optics (Model 504, Applied Science Laboratory). The camera was situated directly below the computer monitor and participants were seated so that the camera to eye distance was approximately 22 inches. A magnetic head tracker (Flock of Birds, Ascension Technology Corporation) was worn by participants to limit

any disruption in eye-tracking as a function of head movement. Stimulus presentation and data collection (i.e., eye position) was achieved using GazeTracker software.

The visual stimuli consisted of five randomized slideshows containing twenty pictures presented randomly to participants on a 27 in computer monitor. Five pictures depicted male atypical gender role professions (receptionist, kindergarten teacher, librarian, nurse, and flight attendant), five pictures depicted male typical gender role professions (business leader, religious leader, construction worker, firefighter, and soldier), five pictures depicted female atypical gender role professions (business leader, religious leader, construction worker, firefighter, and soldier), and five pictures depicted female typical gender role professions (receptionist, kindergarten teacher, librarian, nurse, and flight attendant). The occupations and scenery in the pictures were the same for the female atypical and male typical pictures, as well as for the male atypical and female typical pictures. Each image was presented for 15 seconds and measures of visual interest were defined as the average number of visual fixations and total time on areas of interest (i.e., faces and bodies) during that time interval. Immediately following each picture, the participant completed a questionnaire pertaining to the emotional responses evoked by each picture. The questionnaire contained typical masculine emotions (angry, competitive), typical feminine emotions (cheerful, timid) and neutral emotions (excited).

After the eye-tracking part of the study, participants completed the BEM scale, Bus & Barnes Mating Scale, and the Feminine and Masculine Gender Role Stress Scales

(depending on their gender). Their digit ratios were measured on the right hand using a ruler to identify androgen levels. The final task assessed short-term memory. The participants had 30 seconds to describe on paper the gender role occupations displayed in each picture for males and females.

CHAPTER III

RESULTS

Data were analyzed with two-way, two repeated measures ANOVA with participant sex (male vs. female) and gender rigidity (high vs. low) as the grouping factors and occupation (typical vs. atypical) and sex of image (male vs. female) as the repeated factors.

Hypothesis 1: Visual attention

Figure 1 shows visual attention to gender typical and atypical pictures in men and women. Table 1 and Figure 2 summarize visual attention to male and female atypical and typical pictures. Compared to men, women looked longer at the face and bodies of the images (Figure 1). However, both men and women showed greater looking times (attention) on pictures depicting male typical/ female atypical gender role occupations compared to pictures depicting male atypical/ female typical gender role occupations (Figure 2 & Table 1).

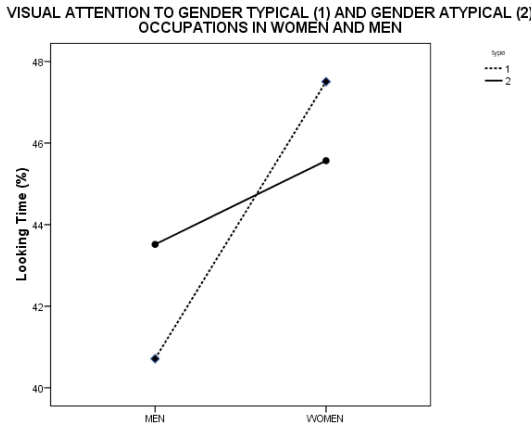

Figure 1. Visual Attention to Gender Typical and Atypical Pictures in Men and Women
Visual attention percentages for men and women when looking at gender atypical and gender typical occupations (specifically the body and face of the target picture). Women in general showed an increase in attention of the face and body in the pictures compared to men $F(1, 78)= 9.571$ $p < .004$.

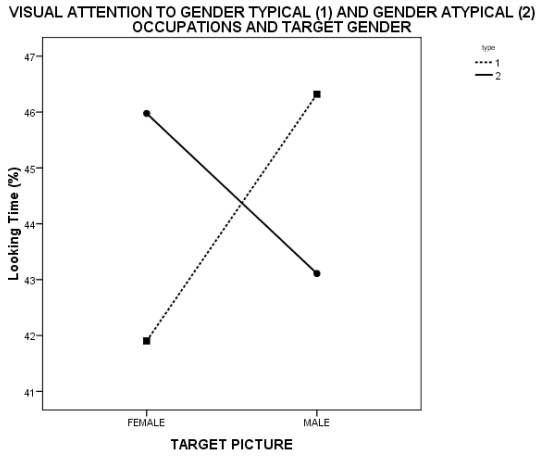

Figure 2. Visual Attention to Gender Typical and Atypical Pictures
Visual attention percentages for gender atypical and typical male and female occupations. Overall both men and women showed increased looking times (attention) at male typical/ female atypical gender role occupations compared to male atypical/ female typical gender role occupations, $F(1, 78)= 15.16$, $p <.000$.

Table 1. Mean Number of Percentage of Looking Time on Face and Body on Atypical and Typical Pictures.

	Women		Men	
	Low M(SD)	High M(SD)	Low M(SD)	High M(SD)
Atypical Female	**46.84(14.94)***	**47.15(11.91)***	**45.17(12.24)**	**42.98(16.17)**
Atypical Male	40.19(14.18)*	45.10(12.10)*	44.14(10.77)	41.77(11.86)
Typical Female	44.05(13.56)*	44.47(12.26) *	42.48(14.39)	34.96(11.18)
Typical Male	**48.21(15.42)***	**49.40(11.77) ***	**44.03(15.06)**	**41.37(16.08)**

Bolded means and standard deviations show preferential looking for high status occupations. Women's means and standard deviations show increased looking time on face and body of targets. (*)

Hypothesis 2: Memory accuracy

Figures 3 and 4 display memory accuracy for gender typical and atypical pictures. Table 2 summarizes the results for the correct number of responses in male and female typical and atypical pictures. On the test of memory for occupations depicted in the pictures, there was a trend for the high gender role rigidity group to report more correct responses for the gender typical pictures, especially male typical occupations. Low gender role rigidity groups reported more correct responses for female typical and male atypical gender role occupations. There was a three-way interaction between the sex of the picture, whether the participant was high or low gender role stress, and which type pictures they got correct compared to incorrect (atypical vs. typical), $F(1, 83)=4.865$, $p <.030$.

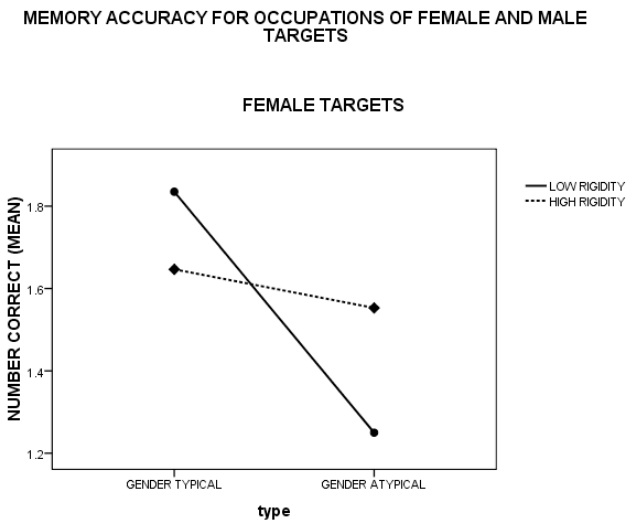

Figure 3.Memory Accuracy of Female Atypical and Typical Pictures

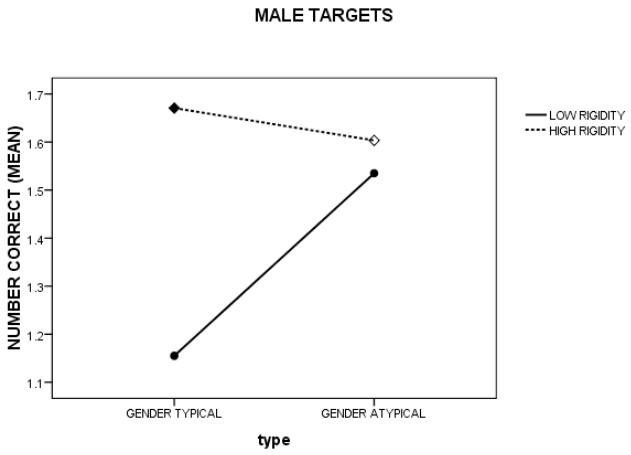

Figure 4. Memory Accuracy for Male Atypical and Typical Pictures

Table 2. Mean Number of Correct Responses in Male and Female Typical and Atypical Pictures.

	Women		Men	
	Low M(SD)	High M(SD)	Low M(SD)	High M(SD)
Gender Typical Female Correct	1.95(.887)*	**1.73(.962)**	1.72(.843)*	**1.56(1.15)**
Gender Typical Male Correct	1.15(.988)	**1.65(1.09)**	1.16(.987)	**1.69(1.01)**
Gender Atypical Female Correct	1.30(.801)	1.73(.667)	1.20(.866)	1.38(.885)
Gender Atypical Male Correct	1.75(.786)*	1.77(.992)	1.32(.988)*	1.44(.727)

Bolded means and standard deviations show a trend for high gender role rigid men and women to report more correct responses for gender typical pictures overall. Low gender role rigidity groups reported more correct responses for female typical and male atypical gender role occupations (*).

Hypothesis 3: Mating strategies

Figures 5, 6, and 7 display the mating preference items with significant differences between men and women, and rigidity. Table 3 summarizes the results for desired characteristics in a potential mate for men and women of high and low gender role rigidity. There was a significant difference between men and women on items 1, 4, 10, and 11. There was a significant difference between gender role rigidity on item 4, and an interaction between sex and gender role rigidity on items 1 and 7.

Buss & Barnes Mating Preferences Scale Sex Difference	Results
Item 1: Kind and Understanding	$p < .002$
Item4: Physical Attractiveness	$p < .000$
Item10: Good Earning Capacity	$p < .001$
Item 11: Good Heredity	$p < .025$

Figure 5. Sex Differences in Mating Strategies
Men rated item 4 as more important and women rated items 1, 10, and 11 as more important when looking for desirable traits in a potential mate.

Buss & Barnes Mating Preferences Scale Gender Role Rigidity Difference	Results
Item 4: Physical Attractiveness	$p < .013$

Figure 6. Gender Role Rigidity Differences in Mating Strategies
High gender role rigid males and females rated attractiveness as more important in a potential mate compared to low gender role rigid males and females.

Buss & Barnes Mating Preferences Scale Interaction Between Sex and Gender Role Rigidity	Results
Item 1: Kind and Understanding	$p < .042$
Item 7: Creative	$p < .001$

Figure 7. Interaction Between Sex and Gender Role Rigidity in Mating Strategies
High gender role rigid women rated item 1 as more important than any other group. Low gender rigid males rated item 1 as more important than high gender role rigid males. Low gender role rigid males rated item 7 as more important than any other group. High gender role rigid females rated item 7 as more important than low gender role rigid females.

Table 3. Mean Ratings of Importance on Desired Characteristic of a Potential Mate.

	Women		Men	
	Low M(SD)	High M(SD)	Low M(SD)	High M(SD)
Item 1 Kind and Understanding	**6.00(0.81)****	**6.76(0.44)****	**5.79(0.88)****	**5.73(1.39)****
Item 2 Exciting Personality	6.21(0.85)	6.36(0.70)	5.83(1.16)	6.47(0.64)
Item 3 Intelligent	6.15(0.83)	6.16(0.85)	6.04(0.99)	5.87(0.74)
Item 4 Physical Attractiveness	**4.95(0.91)***	**5.36(1.04)***	**5.63(0.92)***	**6.27(0.70)***
Item 5 Healthy	5.42(1.34)	6.04(1.02)	5.75(1.18)	5.93(1.03)
Item 6 Easy Going	5.79(1.08)	5.96(1.01)	6.04(1.04)	5.73(1.33)
Item 7 Creative	4.53(1.35)**	5.16(1.62)**	5.33(1.05)**	3.67(1.80)**
Item 8 Wants Children	6.00(1.41)	6.40(1.29)	5.42(1.84)	5.93(1.67)
Item 9 College Graduate	6.10(1.37)	5.80(1.76)	5.12(2.03)	5.53(1.68)
Item 10 Good Earning Capacity	**5.79(1.28)**	**4.84(1.65)**	**4.00(1.64)**	**4.13(1.92)**
Item 11 Good Heredity	**5.10(1.05)**	**4.48(2.06)**	**4.00(1.74)**	**3.87(1.50)**
Item 12 Good Housekeeper	4.00(1.45)	3.84(1.77)	4.00(1.32)	3.93(1.91)
Item 13 Good Housekeeper	4.58(2.24)	5.32(2.17)	4.79(1.91)	4.53(2.29)

Bolded means and standard deviations represent items with a sex difference. Items with '*' represent items with gender role rigidity difference. Items with '**' represent items with interaction between sex and gender role rigidity.

Hypothesis 4: Masculinity and femininity

Table 4 summarizes the results for masculine and feminine traits reported in men and women. As expected, women scored higher in feminine traits and men scored higher in masculine traits on the Sex Role Inventory Scale, $p < .000$. There was a trend in interaction of sex, masculinity/femininity, and high or low gender role rigidity, $p < .087$. High gender role rigid males scored higher in masculine traits compared to low gender role rigid males, and high gender role rigid females scored higher in feminine traits compared to low gender role rigid females. Low gender role rigid men and women scored higher in androgynous traits.

Table 4. Mean Number of Masculine and Feminine Traits in Men and Women.

	Women		Men	
	Low M(SD)	High M(SD)	Low M(SD)	High M(SD)
Masculine	**4.64(0.54)**	4.48(0.61)*	**4.92(0.80)**	5.09(0.47)*
Feminine	**4.79(0.43)**	5.15(0.55)*	**4.32(0.64)**	4.33(0.67)*

Bolded means and standard deviations show low gender role rigid males and females as more androgynous. High gender role rigid males reported more masculine traits and high gender role rigid females reported more feminine traits (*).

Hypothesis 5: Picture ratings

Figure 8 shows the rate of negative responses to atypical gender role occupations. Table 5 summarizes the negative responses to atypical targets. The analyses of subjective

ratings of emotional response to pictures shows that negative emotions were highest in response to women depicted in atypical jobs, $p < .002$. Responses were similar across groups of rigidity.

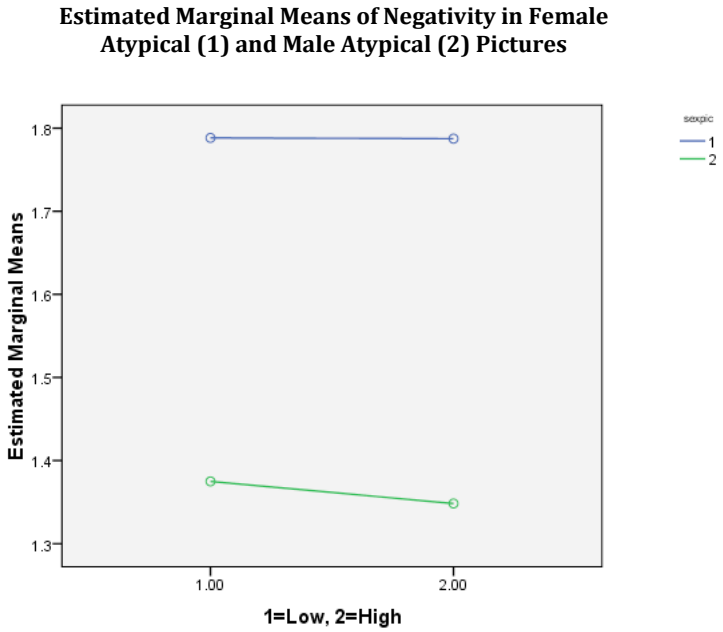

Figure 8. Rate of Negative Responses to Atypical Gender Role Occupations

Table 5. Mean Number of Negative Ratings of Atypical Occupations in Female and Male Targets.

	Women		Men	
	Low M(SD)	High M(SD)	Low M(SD)	High M(SD)
Atypical Female	**1.88(0.94)**	**1.78(1.17)**	**1.68(1.20)**	**1.79(1.08)**
Atypical Male	1.58(0.83)	1.31(0.79)	1.17(1.30)	1.39(0.69)

Bolded means and standard deviations show increased negative rating in atypical female occupations (measured in centimeters).

Hypothesis 6: Heart rate

Preliminary analyses of heart rate response to pictures showed a difference in heart rate between men and women and between high gender role stress and low gender role stress groups.

Summary of results

Table 6. Summary of Results.

Measure	Sex Difference?	Gender Rigidity or Atypicality Difference?	Results For Sex Difference	Results For Rigidity Difference or Interaction
Attention	Yes	Yes	$F(1, 79)= 8.75$ $p < .004$	$F(1, 79) = 14.06$, $p < .000$
Memory	No	Yes		$F(1, 83)= 4.865$ $p <.030$
Mating Preferences	Yes; items 1,4, 10, 11	Yes; item 4	Item 1: $p <.003$ Item 4: $p <.000$ Item 10: $p <.001$ Item 11: $p <.029$	Item 1: $p <.054$ Item 4: $p <.017$ Interaction: Item 1: $p <.027$ Item 7: $p <.001$
Masculinity and Femininity	Yes	Trend and Interaction	$p <.000$	Interaction $p < .087$
Emotional Response	Atypical female occupations were more negatively rated.			$p <.002$
Heart Rate	Pending	Pending		

- Compared to men, women looked longer at the face and bodies of the images. However, both men and women showed greater looking times (attention) on pictures depicting male typical/ female atypical gender role occupations compared to pictures depicting male atypical/ female typical gender role occupations (Figures 1 & 2 and Table 1).
- On the test of memory for occupations depicted in the pictures, there was a trend for the high gender role rigidity group to report more correct responses for the gender typical pictures. Low gender role rigidity groups reported more correct responses for female typical and male atypical gender role occupations (Figures 3 & 4 and Table 2).
- As expected, there was a sex difference on items 1, 4, 10 and 11 and a difference in gender role stress on item 4 on the Buss & Barnes mating preference scale. In addition, there was an interaction between sex and gender role stress on items 1 and 7 (Figures 5,6,7 and Table 3).
- As expected, women scored higher in feminine traits and men scored higher in masculine traits on the Sex Role Inventory Scale. There was a trend for high gender role rigid males to score higher in masculine traits compared to low gender role rigid males and for high gender role rigid females to score higher in feminine traits compared to low gender role rigid females (Table 4).
- The analyses of subjective ratings of emotional response to pictures showed that negative emotions were highest in response to women depicted in atypical jobs (Figure 8 and Table 5).

- Preliminary analyses of heart rate response to pictures showed a difference in heart rate between men and women and between high gender role stress and low gender role stress groups.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Past research has shown that high status occupations, high potency, and likelihood of success in one's profession are associated with masculinity. On the other hand, less desirable, low potency, and low status occupations are associated with femininity (Giannopoulos, Conway, Mendelson, 2005). Our data is consistent with this in that both men and women showed more interest in high status occupations (male typical/female atypical gender role occupations) compared to low status occupations (male atypical/female typical). However, in our results, increased status (increased looking time) only pertained to what is deemed as masculine instead of what is deemed as financially well off. Our gender typical male and gender atypical female pictures consisted of masculine typed job professions across all income levels inferring that increased pay is not the most desirable feature of an occupation, but that masculinity is. Surprisingly, there was not a significant difference between the low and high gender role rigidity groups in looking times of atypical and typical gender role occupations. Even though the low gender role rigidity group reported low gender role stress and typicality, and contained more androgynous characteristics, they still preferred the masculine or high status occupations. This demonstrates how deeply rooted gender roles and ideologies are in our culture, and that those who report low gender role stress and low importance on gender typical behavior, still show biases in their first responses to atypical and typical gender role occupations. Similar results to atypicality and status in

occupational settings has been seen in children as young as 6 years. When asked about familiar occupations, children give higher status ratings to masculine jobs and express greater interest in jobs culturally associated with their own sex. Children have also rated novel jobs portrayed with male workers as having higher status than the identical jobs portrayed with female workers, (Liben, Bigler, & Krogh, 2001).

The high gender role rigidity group reported better recollection overall of occupations presented in the video that were considered typical gender role occupations, consistent with our hypothesis that a typical gender role (a role consistent with gender) would be more salient to someone of high gender role rigidity compared to someone with low gender role rigidity. Past research has shown that when children recall illustrations in picture books containing both gender-consistent and gender-inconsistent images, they tend to distort or misremember gender-inconsistent images. (Frawley, 2008) These results illustrate that gender-inconsistent images are processed differently than gender-consistent images, and demonstrate how high gender role rigidity influences cognitive processing as seen in the recollection test, and can lead to gender stereotyping in occupations (hiring). Interestingly, the low gender role rigidity group reported more correct responses to the lower status occupations, male atypical and female typical images. Further research in this area is needed to fully explain what these results might mean, however, they still display that gender role rigidity influences memory accuracy of gender atypicality in occupations.

Women in atypical jobs were more negatively rated than any other category, consistent with other measures in our study that women in atypical/ masculine occupations evoke an increased negative response. A woman in a typical masculine occupation threatens the status and potency of that job with the negative connotations that have been placed on what is considered feminine (Giannopoulos, Conway, & Mendelson, 2005). In our culture and many cultures worldwide, 'women's work', or feminine occupations, is often unpaid, or underpaid labor. Therefore, women's work receives little value (since value is determined by monetary worth), and evokes a negative response if it replaces what is considered valuable ('men's labor, or paid labor). As the percentage of women in an occupation rises, wages tend to fall. Workers who do what traditionally has been viewed as "women's work" (clerical workers, librarians, child care workers and others) in jobs in which 70 percent or more of the workers are women—typically earn less than workers in jobs that are predominately male or are integrated by gender and experience a loss in value[1]. In addition, social scientists often refer to the 'glass ceiling effect' that negatively impacts women in occupational settings, explaining the covert, invisible barrier to receive promotions and advance in their careers. Men on the other hand, tend to experience the 'glass escalator', and not only find it easily accessible and acceptable to move up the job hierarchy, but as well as move down. Women do not experience this same type of mobility and consequently make up the majority of people in poverty[1]. These results can help explain the preferential looking of the masculine typed

[1] The American Federation of Labor and Congress of Industrial Organizations (ALF-CIO)

occupational settings regardless of salary, as well as the negative response to women's mobility into more masculine type positions.

The purpose of the Bem Sex Role Inventory and the Buss and Barnes Mating Preferences scale was to see if gender role rigidity, masculinity and femininity, as well as mating preferences, influenced how high and low gender role rigidity groups or men and women processed gender atypicality. As expected, the results showed that men in the high gender role rigid group scored higher in masculine traits compared to low gender role rigid males, and that high gender role females scored higher in feminine traits compared to low gender role rigid females, implying that more androgynous individuals process gender atypicality differently than extremely masculine or feminine individuals. In addition, we predicted that individuals with high gender role rigidity would rate evolutionary explanations for mate preferences higher than individuals with low gender role rigidity, and that this processing would find members of the opposite sex in atypical occupations, less attractive for a potential mate. The sex differences found were on key evolutionary mating strategies: Women rated item 1(kind and understanding), item 10 (good earning capacity) and item 11 (good hereditary) as more important, whereas males rated item 4 (physical attractiveness) as more important. However, high gender role rigid males and females rated item 4 (physical attractiveness) as more important than their low gender role rigid counterparts. In other words, high gender role rigid groups placed a greater importance on attractiveness, presumably for fertility or genetic reasons. For item 7: (creativity) and item 1: (kind and understanding),

low gender role rigid males and high gender role rigid females reported these as more important than the other groups. These two groups are the ‘most feminine’ out of their ‘within’ subject group (sex) and that might reflect their importance of these two items.

Our preliminary results show a difference in heart rate between men and women, and between high gender role stress and low gender role stress groups, displaying further evidence that men and women respond differently to gender atypicality. It is our hope that this data will show that even physiological responses can be detected from increased threat levels, and will provide an additional scientific measure for negative responses to atypicality in occupational settings.

Negative attitudes and stereotyping of atypicality within occupational settings is an important issue resulting in inequitable working conditions for women and it is my hope that this research can help explain why this exists and offer some insights to possible solutions. Today, roughly 70% of women have experienced sexual harassment in the work force, receive roughly 77 cents to a man’s dollar and ultimately lose between $700,000 and $2 million over the course of her work life because of unequal pay, and perform two-thirds of the world’s work but only receive 5% of the world’s income (Shaw & Lee, 2009). These inequalities for women in professional settings affect men too. For example, America's working families lose $200 billion of income annually to the wage gap, an average loss of more than $4,000 each for working women's families

every year because of unequal pay[2]. Gender is not the only aspect influencing discrimination in the work place- this research can provide further implications for other discriminatory forces people experience in their professional lives, such as race, weight, age, sexuality, and religion.

In sum, these results have demonstrated that exposure to gender atypical occupations, especially female atypical occupations, increased negative emotions and influenced cognitive behavior, and show the consequences of extreme gender role rigid attitudes and gender socialization. In a culture where masculinity is valued and preferred over femininity, these results can help explain the covert sexism that is still rampant in occupational settings leading to unequal pay, sexual assault, and lack of mobility that only women tend to experience, and will hopefully provide some insight on how to challenge these deeply rooted stereotypes and feelings about gender, worth, and status, as well as providing a safe work environment with equal opportunities for women.

[2] The American Federation of Labor and Congress of Industrial Organizations (ALF-CIO)

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APPENDIX

Figure 9. Typical Male Occupations

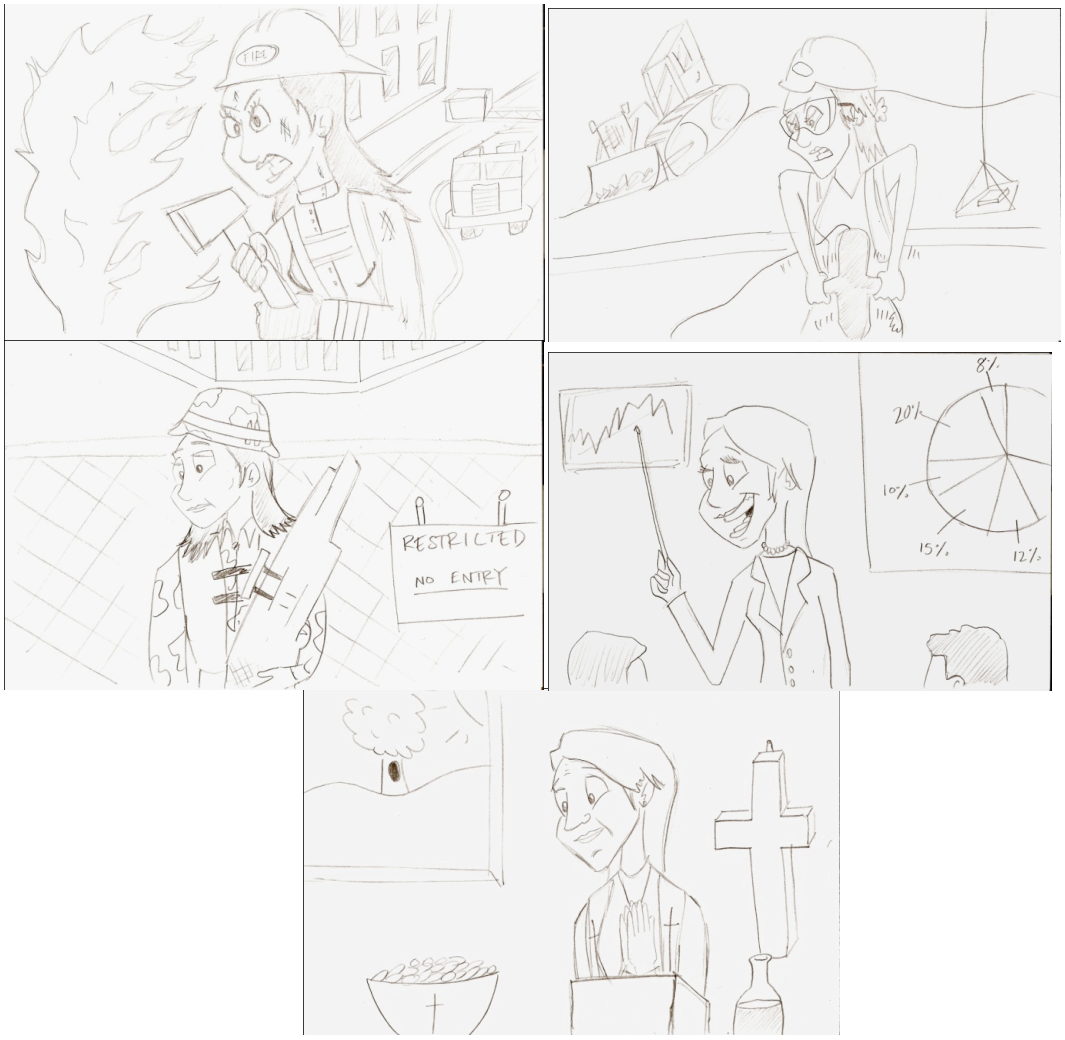

Figure 10. Atypical Female Occupations

Figure 11. Atypical Male Occupations

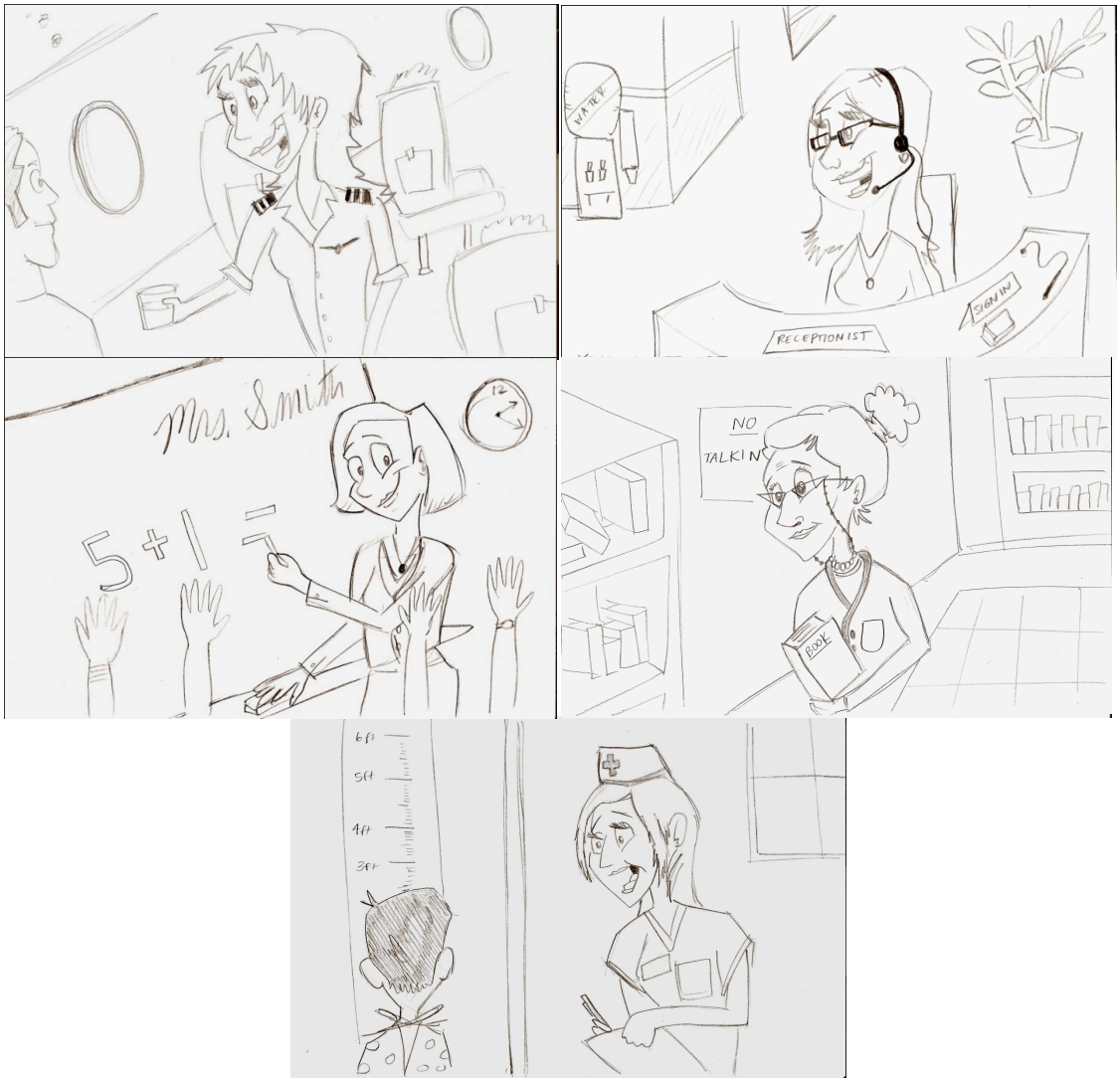

Figure 12. Typical Female Occupations

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